Listing of the Claims:

The following is a listing of all claims within the national stage application, and the Applicants respectfully request amendment of the claims as shown:

1. (Original) A method for determining a phase transition of a substance, comprising:

generating a first measuring signal by measuring a substance-directed heat flow;

generating a measuring signal phase-shifted in relation to the first measuring signal;

determining a difference signal between the first measuring signal and the phase-shifted measuring signal and

determining the phase transition if a property of the difference signal meets a predetermined condition.

2. (Original) A method according to claim 1, wherein the generation fo the first measuring signal comprises:

varying a temperature of a first surface;

measuring a heat flow from the substance to the first surface and

wherein the generation of the phase-shifted signal comprises:

varying a temperature of a second surface, which varying is phase-shifted in relation to the varying of the temperature of the first surface;

measuring a heat flow from the substance to the second surface.

3. (Original) A method according to claim 2, wherein the varying of the temperature of at least one of the said surfaces comprises:

heating up the surface by means of a heating element located near the surface;

cooling down the surface by means of a cooling element thermally connected to the surface and located at a distance from the surface.

4. (Original) A method according to claim 3, wherein measuring the heat flow comprises:

measuring a heat flow form the surface to the cooling element.

5. (Currently Amended) A method according to claim 3 ~~or 4~~; wherein the cooling down of the surface comprises:

maintaining at least a part of the cooling element at a constant temperature;

and wherein the heating up of the surface comprises:

varying thermal energy supplied to the surface by the heating element; and

wherein the cooling down and heating up of the surface are carried out at least partially simultaneously.

6. (Currently Amended) A method according to ~~any one of the preceding claims~~claim 1, wherein the phase transition is the transition from the gaseous phase to the liquid phase of the substance.

7. (Currently Amended) A method according to ~~any one of the preceding claims~~claim 1, wherein the method is used for determining the dew point of a gas.

8. (Original) An apparatus for determining a phase transition of a substance, comprising:

a heat flow meter for measuring a substance-directed heat flow, which

heat flow meter has a meter output for delivering a first measuring signal constituting a measure for the value of the measured heat flow;

means for generating a phase-shifted measuring signal;

a difference-determining element for determining a difference signal on the basis of the first measuring signal and the phase-shifted measuring signal; and

means for detecting the phase transition on the basis of the difference signal.

9. (Original) An apparatus according to claim 8, comprising:

a first heating element;

a first heat flow meter thermally connected to the first heating element, the means for generating a phase-shifted measuring signal comprising:

a second heat flow meter and

a second heating element thermally connected to the second heat flow meter, which first and second heating element are connected to a control circuit which, in use, controls the second heating element in a phase-shifted manner in relation to the first heating element.

10. (Original) An apparatus according to claim 8, wherein the means for generating a phase-shifted measuring signal comprise an electronic circuit, which electronic circuit at least comprises:

a phase-shifting element connected to an output of the heat flow meter;

a combining element having

a first input connected to an output of the phase-shifting element and

a second input connected to the output of the heat flow meter,

an output to which a difference signal of the signals presented to the inputs is provided, wherein one of the inputs is a negative input and another of the inputs in a positive input;

and which circuit further comprises:

a detection element connected to the output of the combining element for detecting a predetermined property of the difference signal.